The invention claimed is:

1. A method of positioning optical fibers in a ferrule comprising the steps of:

providing a ferrule comprising at least one capillary extending axially through said ferrule;

inserting at least two optical fibers through said ferrule such that a portion of said fibers extend out of the end of said ferrule;

providing a fiber alignment device comprising at least one fiber capillary;

applying said alignment device to said fibers extending from said ferrule such that said fibers are positioned in said at least one fiber capillary of said device;

applying adhesive to said fibers; and

curing said adhesive.

2. The method of positioning optical fibers of claim 1, wherein the fiber alignment device comprises two wafers, each of said wafers comprising grooves which form at least one fiber capillary when the wafers are aligned and wherein the step of applying said alignment device comprises clamping said two wafers onto said fibers extending from said ferrule.

3. The method of positioning optical fibers of claim 2, wherein said two wafers comprise matching alignment grooves.

4. The method of positioning optical fibers of claim 3, wherein the tolerance of said matching alignment grooves is less than 5 μm.

5. The method of positioning optical fibers of claim 3, wherein the tolerance of said matching alignment grooves is less than 1 μm.

6. The method of positioning optical fibers of claim 3, wherein the tolerance of said matching alignment grooves is less than 0.2 μm.

7. A method of manufacturing an optical subassembly comprising the steps of:

providing a ferrule comprising a capillary extending axially through said ferrule;

providing a plurality of optical fibers;

applying adhesive to said fibers such that said fibers are held together;

inserting said plurality of fibers through said capillary; and

curing said adhesive.

8. The method of claim 7, further comprising, after the step of inserting, the step of applying a liquid adhesive to said fibers outside of said capillary such that said adhesive is drawn into said capillary.

9. A method of manufacturing a fiber optic subassembly comprising the steps of:

providing a ferrule comprising a capillary extending axially through said ferrule;

providing a plurality of optical fibers;

inserting said fibers through said capillary; and

applying a first liquid adhesive to said fibers adjacent to said ferrule such that said adhesive is drawn into said capillary.

10. The method of manufacturing a fiber optic subassembly of claim 9, further comprising the step of applying heat to said adhesive to improve the flow of said adhesive into said capillary.

11. The method of manufacturing a fiber optic subassembly of claim 9, further comprising, between the steps of inserting and applying, the step of applying a small amount of a second adhesive to said fibers outside of said ferrule and curing said second adhesive to block the flow of said first liquid adhesive.

12. The method of manufacturing a fiber optic subassembly of claim 9, wherein the viscosity of said adhesive is about 3000 cPs.

13. The method of manufacturing a fiber optic subassembly of claim 9, wherein the viscosity of said adhesive is between about 2000 cPs and about 5000 cPs.

14. A method of assembling a fiber ferrule subassembly comprising the steps of:

providing a ferrule comprising at least one capillary extending axially through said ferrule;

providing a plurality of optical fibers screened for at least one characteristic selected from the group consisting of: core concentricity, ovality, and diameter; and

inserting said plurality of fibers through said at least one capillary.

15. The method of assembling of claim 14 wherein the tolerance for core concentricity is 1.0 μm, the tolerance for ovality is 0.8 percent, and the tolerance for diameter is 1.0 μm.

16. The method of assembling of claim 15 wherein the tolerance for core concentricity is 0.5 μm, the tolerance for ovality is 0.4 percent, and the tolerance for diameter is 0.5 μm.

17. The method of assembling of claim 16 wherein the tolerance for core concentricity is 0.1 μm, the tolerance for ovality is 0.12 percent, and the tolerance for diameter is 0.1 μm.

18. A method of assembling a fiber ferrule for an optical assembly comprising the steps of:

providing a fiber ferrule comprising at least one capillary extending axially through said ferrule, and wherein said at least one capillary is selected from the group consisting of a square capillary, a rectangular capillary, a dual-oval capillary, a four-circular capillary, a two-wafer capillary, and a capillary comprising an alignment washer;

providing a plurality of optical fibers;

inserting said fibers through said at least one capillary;

applying adhesive to said fibers; and

curing said adhesive.

19. The method of assembling of claim 18 wherein a gap between the fibers and the proximate wall of the capillary is less than about 1.5 μm.

20. The method of assembling of claim 18 wherein a gap between closely adjacent fibers is less than about 1.5 μm.

21. The method of assembling of claim 20 wherein a gap between closely adjacent fibers is less than about 1.0 μm.

22. The method of assembling of claim 21 wherein a gap between closely adjacent fibers is less than about 0.5 μm.

23. The method of assembling of claim 18 wherein the tolerance for the walls of the at least one capillaries are 2.0 μm.

24. The method of assembling of claim 23 wherein the tolerance for the walls of the at least one capillaries are 1.0 μm.

25. The method of assembling of claim 24 wherein the tolerance for the walls of the at least one capillaries are 0.5 μm.